# Spind Malaysia Sdn Bhd v Justrade Marketing Sdn Bhd & Anor

FEDERAL COURT (PUTRAJAYA) — CIVIL APPEAL NO 02(f)-55–08 OF 2016(W)
RAUS SHARIF CHIEF JUSTICE, HASAN LAH, AZAHAR MOHAMED, BALIA YUSOF FCJJ AND ALIZATUL KHAIR JCA
30 JANUARY 2018

*Trade Marks — Patents — Validity — Novelty — Whether invention anticipated by prior art — Whether disclaimed feature expressly stated in patent — Whether disclaimed feature was solution to problems in field of technology generally — Whether patent involved inventive steps — Whether patent valid — Whether there was infringement — Patents Act 1983 ss 12(1) & 14(1)*

The appellant had invented a plumb product known as the SPIND Floor Gully/Trap ('SPIND') and, since 2006, was the registered proprietor of a Malaysian patent entitled 'Improvement in relating to floor traps' ('MY-567') which had five features, namely: (i) embedded in the floor slab; (ii) allowed liquid to flow in a concentric S-flow manner; (iii) had three parts which formed a gully/trap; (iv) designed to enable a built-in water seal to be formed ('fluid tight feature'); and (v) capable of being repaired in the event of damage to the internal parts. Features (i)–(iii) were also present in a United States Patent entitled 'Drainage Trap' ('USP-210'). In May 2011, the respondents filed a patent application entitled 'Top Accessible Drainage Floor Trap with built-in control valve' which commercially developed into a plumbing product known as 'PAZTEE Floor Gully/Trap' ('PAZTEE'). According to the appellant, PAZTEE was similar to SPIND. The appellant commenced an action in the High Court against the respondent for infringements of MY-567. The respondents in turn filed a counterclaim challenging the validity of MY-567. The High Court judge held that MY-567 was not an invention within the meaning under s 12 of the Patents Act 1983 ('the Act') and invalidated the same. The appellant's appeal to the Court of Appeal but was unsuccessful. Hence, the present appeal. The appellant submitted that: (a) the courts below had confused the claimed features of MY-567 with its inventive concept; (b) MY-567 had disclosed three inventive concepts, namely, the reparability feature, the fluid tight feature and the installation method, all of which were absent from the prior art and not obvious to a person skilled in the art. The issues that arose were: (i) whether for the purpose of considering whether a patented invention was inventive or not obvious, the court was required to apply and carry out the four-step test in *Windsurfing International Inc v Tabur Marine (Great Britain) Ltd* ('the *Windsurfing* test'); (ii) whether there was a distinction between determining 'claimed features' of the claims of a patent and

A determining the 'inventive concepts' of the invention in the patent; and (iii) whether an assessment of the 'inventive concept' of the invention was to be confined to just the claims of the patent or should be construed from reading the patent specification as a whole and with common knowledge of the skilled person.

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**Held,** dismissing the appeal with costs:

(1) The contention that the inventive concept need not be a part of the claims was based on a fundamental misconception of the rationale of C patent law and the inventive step requirement. The scope of the monopoly granted by a patent is defined by its claims. In assessing inventiveness, what is ultimately determined was 'whether the patent has disclosed something sufficiently inventive to deserve the grant of a monopoly', in accordance with the policy of rewarding inventors without D stifling innovation (see para 103).

(2) The *Windsurfing* test is a good starting point for analysing the issue of inventive step. The structured test offers a useful framework for considering the various factors involved in the assessment, and provides E some clarity of reasoning and consistency of approach. While the four-step test will be a helpful guide in most cases, the individual steps should not be taken as set in stone and mechanically applied. The court must always bear in mind that the ultimate question, expressed in s 15 of the Patents Act 1985 and contained in the fourth and final step, is simply F whether the invention is obvious to a person having ordinary skill in the art, having regard to the prior art (see para 76).

(3) Applying the principles of purposive construction, the reparability feature was not expressly stated nor alluded to in the language of claim 1. It was a technical advantage derived from the inter-working of the G separate portions in a three-part design, a design which has been disclosed in USP 210. The monopoly claimed by MY-567 could not be broadened to include the reparability feature by reference to the background section of the specifications. Hence, the reparability feature H did not fall within the scope of the claims in MY-567 (see para 125).

(4) Since the reparability feature was not claimed, it ought not to be taken into account in the assessment of either novelty or inventiveness. The fact that the reparability feature was disclaimed did not itself destroy the novelty of MY-567. However, the appellant was not granted leave to I challenge the finding that the fluid tight feature was not novel or to raise other purported novel features at this stage. In the circumstances, the finding of the courts below that MY-567 was not novel still stood (see para 126).

(5) Even if the invention in MY-567 was novel, it did not involve an inventive step as required in s 15 of the Patents Act 1983. While the High Court and the Court of Appeal have not applied the *Windsurfing* test in a structured manner, having applied the test, the court saw no reason to depart from the conclusion reached by the courts below on inventiveness (see para 143).

**[Bahasa Malaysia summary**

Perayu telah merekacipta satu produk paip yang dikenali sebagai SPIND Floor Gully/Trap ('SPIND') dan, sejak 2006, adalah pemilik berdaftar paten Malaysia bertajuk 'Improvement in relating to floor traps' ('MY-567') yang mempunyai lima ciri iaitu: (i) tertanam dalam kepingan lantai; (ii) membolehkan cecair padat mengalir dalam bentuk S; (iii) mengandungi tiga bahagian saling membantu bagi membentuk floor gully/trap; (iv) direka untuk membolehkan sau 'built in water seal' dan (v) boleh dibaiki jika berlaku kerosakan pada bahagian dalamannya. Ciri-ciri (i)–(iii) juga wujud dalam paten Amerika Syarikat bertajuk 'Drainage Trap' ('USP-210'). Pada Mei 2011, responden-responden memfailkan satu permohonan paten bertajuk 'Top Accessible Drainage Floor Trap with built-in control valve' yang menjadi produk paip komersial yang dikenali sebagai 'PAZTEE Floor Gully/Trap' ('PAZTEE'). Menurut perayu, PAZTEE serupa dengan SPIND. Perayu memulakan satu tindakan di Mahkamah Tinggi terhadap responden bagi pelanggaran MY-567. Responden-responden sebaliknya memfailkan tuntutan balas terhadap kesahan MY-567. Hakim Mahkamah Tinggi memutuskan MY-567 bukan reka cipta menurut maksud s 12 Akta Paten 1983 ('Akta') dan membatalkannya. Perayu meraya ke Mahkamah Rayuan tetapi tidak berjaya. Oleh itu, rayuan ini. Perayu menghujahkan bahawa: (a) mahkamah bawahan terkeliru ciri-ciri yang dituntut dalam MY-567 dengan konsep reka ciptanya; (b) MY-567 mendedahkan tiga konsep reka cipta, khususnya, ciri baik pulih, ciri sendat cecair dan kaedah memasang, yang kesemuanya tidak wujud dalam seni terdahulu serta tidak ketara buat seorang mahir dalam seni tersebut. Isu-isu yang timbul adalah: (i) sama ada, bagi maksud mempertimbang sama ada satu-satu reka cipta yang boleh dipaten bersifat reka cipta atau tidak ketara, mahkamah harus mengguna pakai ujian empat langkah dalam *Windsurfing International Inc v Tabur Marine (Great Britain) Ltd* ('ujian *Windsurfing*'); (ii) sama ada terdapat perbezaan dalam menentukan 'ciri-ciri yang dituntut' dalam satu tuntutan paten dengan menentukan 'konsep mereka cipta' satu reka cipta dalam paten tersebut; dan (iii) sama ada satu penilaian terhadap 'konsep mereka cipta' satu-satu reka cipta harus dihad hanya pada tuntutan-tuntutan paten atau harus ditafsir berdasarkan penelitian spesifikasi paten secara keseluruhan dan dengan pengetahuan umur seorang yang berkemahiran.

**Diputuskan,** menolak rayuan:

(1) Hujahan bahawa konsep mereka cipta tidak perlu menjadi sebahagian

A tuntutan adalah disebabkan salah tanggapan asas terhadap rasional undang-undang paten dan kehendak-kehendak langkah mereka cipta. Skop monopoli yang diberi oleh satu-satu paten ditentukan melalui tuntutannya. Dalam menilai reka cipta, apa yang ditanya akhirnya adalah 'sama ada paten memperlihatkan satu reka cipta hingga
B mewajarkan pemberian monopoli' iaitu selaras dengan dasar menggalakkan reka ciptaan tanpa menjejaskan inovasi (lihat perenggan 103).

(2) Ujian *Windsurfing* adalah titik pemula yang bagus untuk menganalisis
C isu langkah reka cipta. Ujian berangka ini menawarkan rangka kerja yang berguna bagi pertimbangan pelbagai faktor yang terlibat dalam penilaian dan memperuntukkan sedikit pencerahan terhadap sebab dan keselarasan pendekatan. Walaupun ujian empat-langkah memberi panduan berguna dalam kebanyakan kes, setiap langkah tidak perlu
D dianggap sebagai wajib dan harus diguna pakai secara mekanikal. Mahkamah harus sentiasa beringat bahawa soalan kemuncaknya adalah, seperti yang dinyatakan dalam s 15 Akta dan terkandung dalam langkah keempat, adalah sama reka cipta tersebut ketara buat seorang yang berkemahiran biasa dalam seni tersebut, mengambil kira seni terdahulu
E (lihat perenggan 76).

(3) Mengguna pakai prinsip-prinsip tafsiran konstruktif, ciri boleh dibaiki tidak dinyatakan dengan jelas atau dirujuk dalam bahasa tuntutan 1. Ini satu kelebihan teknikal yag timbul daripada kerjasama antara
F bahagian-bahagian asing dalam rekaan tiga bahagian, satu rekaan yang juga terdapat dalam USP-210. Monopoli yang dituntut oleh MY-567 tidak boleh diluaskan untuk merangkumi ciri yang boleh dibaiki dengan rujukan pada latar belakang bahagian spesifikasi. Oleh itu, ciri boleh dibaiki tidak terangkum dalam skop tuntutan-tuntutan dalam MY-567
G (lihat perenggan 125).

(4) Oleh kerana ciri boleh dibaiki tidak boleh dituntut, maka ini tidak harus diambil kira dalam menilai kebaharuan atau reka ciptaan. Fakta bahawa ciri boleh dibaiki tidak dituntut tidak, dengan sendirinya, memusnahkan
H kebaharuan MY-567. Walaupun perayu telah tidak diberi kebenaran mencabar dapatan bahawa ciri sendat cecair bukan sesuatu yang baharu atau untuk membangkitkan ciri-ciri lain yang dianggap baharu di peringkat ini. Oleh itu, dapatan mahkamah bawahan bahawa MY-567 bukan baharu masih kekal (lihat perenggan 126).

I (5) Jika pun reka cipta dalam MY-567 adalah baharu, ia tidak melibatkan langkap reka cipta seperti yang ditetapkan dalam s 15 Akta. Walaupun Mahkamah Tinggi dan Mahkamah Rayuan tidak mengguna pakai ujian *Windsurfing* secara berstruktur, setelah mengguna pakai ujian tersebut, mahkamah ini tidak melihat apa-apa alasan untuk menyimpang daripada

apa yang diputusan oleh mahkamah-mahkamah tersebut berkenaan reka ciptaan (lihat perenggan 143).]

**Notes**

For a case on validity, see 12(2) *Mallal's Digest* (5th Ed, 2017 Reissue) para 2958.

**Cases referred to**

*Ainsbury v Millington* [1987] 1 All ER 929, HL (refd)
*AstraZeneca AB v Apotex Pty Ltd* [2015] HCA 30, HC (refd)
*Beecham Group Ltd's (Amoxycillin) Application, Re* [1980] RPC 261, CA (refd)
*Biogen v Medeva* [1997] RPC 1, HL (refd)
*Blue Valley Plantation Bhd v Periasamy a/l Kuppannan & Ors* [2011] 5 MLJ 521, FC (refd)
*British United Shoe Machinery Co Ltd v A Fussell & Sons Ltd* (1908) 25 RPC 631, CA (refd)
*British Westinghouse Electric and Manufacturing Co v Braulik* (1910) 27 RPC 209, CA (refd)
*Brugger and others v Medic-Aid Ltd* [1996] RPC 635, Ch D (folld)
*Catnic Components Ltd and Another v Hill and Smith Ltd* [1982] RPC 183, HL (refd)
*Cipla Ltd v Glaxo Group Ltd* [2004] RPC 843, Ch D (refd)
*Conor Medsystems Incorporated v Angiotech Pharmaceuticals Incorporated and others* [2008] UKHL 49, HL (refd)
*Datuk Syed Kechik bin Syed Mohamed & Anor v The Board of Trustees of The Sabah Foundation & Ors and another application* [1999] 1 MLJ 257, FC (refd)
*Electric & Musical Industries Ltd & Boonton Research Corporation Limited v Lissen Ltd; Electric & Musical Industries Ltd and Boonton Research Corporation Ltd v G Kalis (trading as Andy's Radio Supplies) (Consolidated)* [1939] 56 RPC 23, HL (refd)
*First Currency Choice Pte Ltd v Main-Line Corporate Holdings Ltd and another appeal* [2008] 1 SLR 335, CA (folld)
*Genelabs Diagnostics Pte Ltd v Institut Pasteur & Anor* [2001] 1 SLR 121, CA (refd)
*Generics (UK) Ltd and others v H Lundbeck A/S* [2009] UKHL 12, HL (refd)
*Ho Tack Sien & Ors v Rotta Research Laboratorium SpA & Anor (Registrar of Trade Marks, intervener)* [2015] 4 MLJ 166, FC (folld)
*Kerajaan Malaysia v Mudek Sdn Bhd* [2017] 5 MLJ 133, FC (refd)
*Kirin-Amgen Inc and others v Hoechst Marion Roussel Ltd and others; Hoechst Marion Roussel Ltd and others v Kirin-Amgen and others* [2005] 1 All ER 667; [2004] UKHL 46, HL (refd)
*Lockwood Security Products Pty Ltd v Doric Products Pty Ltd (No 2)* (2007) 235 ALR 202, HC (refd)
*Merck & Co Inc v Pharmaforte Singapore Pte Ltd* [2000] 3 SLR 717, CA (refd)

*Morgan & Co Ltd v Windover & Co Ltd* (1890) 7 RPC 131, HL (refd)
*Molnlycke AB and another v Procter & Gamble Limited and others (No 5)* [1994] RPC 49, Ch D (refd)
*Mühlbauer AG v Manufacturing Integration Technology Ltd* [2010] 2 SLR 724, CA (refd)
*Non-Drip Measure Coy Ld v Stranger's Ld and Others* [1943] RPC 135, HL (refd)
*Novo Nordisk A/S v DSM NV* [2000] All ER (D) 2420; [2001] RPC 35, Ch D (refd)
*PLG Research Ltd and another v Ardon International Ltd and others* [1995] RPC 287, CA (refd)
*Peng Lian Trading Co v Contour Optik Inc and others* [2003] 2 SLR 560, CA (refd)
*Pozzoli SPA (a company incorporated under the laws of Italy) v BDMO SA (a company incorporated under the laws of Belgium) and another* [2007] EWCA Civ 588, CA (not folld)
*R v Secretary of State for the Home Dept, ex parte Salem* [1999] AC 450, HL (refd)
*Rockwater v Technip France SA and another* [2004] EWCA Civ 381, CA (refd)
*SKB Shutters Manufacturing Sdn Bhd v Seng Kong Shutter Industries Sdn Bhd & Anor* [2015] 6 MLJ 293, FC (refd)
*Sababumi (Sandakan) Sdn Bhd v Datuk Yap Pak Leong* [1998] 3 MLJ 151, FC (refd)
*Société Technique De Pulverisation Step v Emson Europe Ltd and others* [1993] RPC 513, CA (refd)
*Sun Life Assurance Co of Canada v Jervis* [1944] AC 111, HL (refd)
*Technograph Printed Circuits Limited v Mills & Rockley Electronics) Limited* [1972] RPC 346, HL (refd)
*Terengganu Forest Products Sdn Bhd v Cosco Container Lines Co Ltd & Anor and other applications* [2011] 1 MLJ 25, FC (refd)
*The General Tire & Rubber Company v The Firestone Tyre and Rubber Company Limited and others* [1972] RPC 457, SC (refd)
*Unilever Plc v Chefaro Proprietaries Ltd* [1994] RPC 567, Ch D (refd)
*Vickers, Sons & Co Ltd v Siddell* (1890) 15 App Cas 496, HL (refd)
*Wheatley and another v Drillsafe Ltd and others* [2000] All ER (D) 926; [2001] RPC 133, CA (refd)
*Windsurfing International Inc v Tabur Marine (Great Britain) Ltd* [1985] RPC 59, CA (folld)

**Legislation referred to**

Courts of Judicature Act 1964 s 96, 96(a)
Evidence Act 1950 s 45
Patents Act 1949 [UK] s 32(1)(f)
Patents Act 1977 [UK] s 3
Patents Act 1983 ss 11, 12, 12(1), 13, 14(2)(a), 15, 16, 26, 56, 56(2)(a)

Patents and Designs Act 1932 [UK]
Patent Regulations 1986 r 12
Rules of the Federal Court 1995 r 47(4)
Statute of Monopolies 1623 [UK]

**Appeal from:** Civil Appeal No W-02(IPCV)(W)-2115–12 of 2014 (Court of Appeal, Putrajaya)

*Teo Bong Kwang (Wong Chee Wai and Ng Yueng May with him) (Chang Haryaty) for the appellant.*
*Lee Chan Leong (Lee Yeok Choo with him) (Lee YC & Co) for the respondents.*

**Raus Sharif Chief Justice (delivering judgment of the court):**

INTRODUCTION

**[1]** The present appeal concerns the validity of a patent relating to a plumbing product known as the SPIND Floor Gully/Trap. The appellant brought an action for, inter alia, infringement of the patent against the respondents. The respondents filed a counterclaim seeking a declaration that the patent is invalid.

**[2]** On 27 November 2014, the High Court dismissed the appellant's claim and allowed the respondents' counterclaim.

**[3]** On 22 March 2016, the appellant's appeal was unanimously dismissed by the Court of Appeal.

**[4]** Leave to appeal was granted by this court on 20 July 2016 in respect of the following questions of law:

(a) whether for the purpose of considering whether a patented invention is inventive (or not obvious), the court is required to apply and carry out the four-steps test from the case of *Windsurfing International Inc v Tabur Marine (Great Britain) Ltd* [1985] RPC 59 (or more commonly known as the '*Windsurfing* test') — ie 'The first is to identify the inventive concept embodied in the patent in suit. Thereafter, the court has to assume the mantle of the normally skilled but unimaginative addressee in the art at the priority date and to impute to him what was, at that date, common general knowledge in the art in question. The third step is to identify what, if any, differences exist between the matter cited as being 'known or used' and the alleged invention. Finally, the court has to ask itself whether, viewed without any knowledge of the alleged invention, those differences constitute steps which would have been obvious to the

A skilled man or whether they require any degree of invention'? ('question 1');

(b) whether there is a distinction to be drawn between determining the 'claimed features' of the claims of a patent (for the purposes of assessing novelty and infringement) and determining the 'inventive concepts' of the invention in the patent (for the purpose of assessing inventiveness)? ('question 2'); and

(c) if the answer to question 2 is in the affirmative, whether an assessment of the 'inventive concepts' of the invention is to be confined to just the claims of the patent or should be construed from reading the patent specifications as a whole and with the common knowledge of the skilled person? ('question 3').

**[5]** We heard this appeal on 22 August 2017, and adjourned the matter for our decision. We now give our decision and our reasons for the same.

*Material facts*

**[6]** The appellant is a company in the business of designing and manufacturing plumbing products, including one known as the SPIND Floor Gully/Trap. The appellant is also the registered proprietor of Malaysian Patent No MY-125567-A ('MY-567') entitled 'Improvement in and relating to floor traps' since 30 August 2006.

**[7]** The first respondent is a company in the business of supplying construction materials and related products. The first respondent was appointed as the appellant's marketing agent for the SPIND Floor Gully/Trap in Vietnam from October 2010–March 2011.

**[8]** The second respondent is a shareholder and director of the first respondent. He was appointed as the appellant's marketing consultant from April 2008–March 2011.

**[9]** On 12 May 2011, the first respondent filed patent application P12011002144 entitled 'Top Accessible Drainage Floor Trap with built in control valve' with the Malaysian Intellectual Property Office (MyIPO). The patent was commercially developed into the first respondent's PAZTEE Floor Gully Trap. The second respondent was named the inventor of the product.

**[10]** The appellant contended that the product is similar to the latest developed version of the SPIND Floor Gully/Trap. Consequently, the appellant filed an action in the High Court against the respondents for infringement of patent MY-567, infringement of industrial design, and breach

of confidential information. The respondents disputed the appellant's claim and filed a counterclaim challenging the validity of the patent, on the basis that it is not new or inventive, as well as the validity of the industrial design. The present appeal relates only to the issue of the validity of the patent.

*At the High Court*

**[11]** The High Court allowed the respondents' counterclaim. MY-567 was held to be invalid on the grounds that it was not an invention, not novel, and did not involve an inventive step. Accordingly, the High Court held that the issue of infringement did not arise.

**[12]** At trial, the appellant called two expert witnesses, PW1 and PW2. The respondents called three expert witnesses, DW1, DW2, and DW3 (the second respondent). At the outset, the learned trial judge declined to 'simply caste *[sic]* aside the evidence of DW3' on the basis that he is an interested party, but 'will assess his evidence as against the evidence of the plaintiff's expert witness'. The learned trial judge explained that ultimately, the interpretation of the patent claims was a question for the court.

**[13]** From the expert evidence, the learned trial judge distilled five essential features of MY-567, namely that the floor trap disclosed:

(i) is embedded in the floor slab;

(ii) allows liquid to flow in a concentric S-flow manner;

(iii) comprises of three parts which work together to form a floor gully/trap;

(iv) is designed to enable a built-in water seal to be formed, by way of a fluid tight seal between the inner and outer portions of the floor trap ('fluid tight feature'); and

(v) is capable of being repaired in the event of damage to the internal parts by removing and replacing the damaged portion, due to the inter-working of the three separate parts of the floor trap ('reparability feature').

**[14]** The learned trial judge observed that the experts of both sides were on common ground that features (i)–(iii) were present in both MY-567 and US Patent 3,042,210 entitled 'Drainage Trap' (USP 210); however, they differed in respect of features (iv) and (v).

**[15]** On the issue of novelty, the learned trial judge found that MY-567 was not new as its essential features were anticipated by a prior art, namely USP 210, which was granted on 3 July 1962. The learned trial judge considered the

two disputed features of MY-567:

(a) in relation to the fluid tight feature, USP 210 described a floor trap with the abutting slopes of the inner and outer portions (equivalent to the first and second portions in MY-567) 'tightly abut together'. The learned trial judge interpreted 'tightly abut together' to mean that the contact point must be fluid tight, stating that any invention intended to serve as a drainage trap must necessarily and inevitably be fluid tight. Thus the learned trial judge concluded that the fluid tight feature has been anticipated by USP 210; and

(b) in relation to the reparability feature, it was noted that the feature was not expressly stated in claim 1 of MY-567. The learned trial judge held that since the monopoly claimed must be clearly defined with precision, what was not claimed was therefore disclaimed.

**[16]** On the issue of inventive step, the learned trial judge found that MY-567 did not involve an inventive step, having regard to the following purported inventive concepts relied upon by the appellant:

(a) in relation to the fluid tight feature, in view of the finding that the feature could be found in USP 210, the learned trial judge held that it therefore could not be an inventive concept;

(b) in relation to the reparability feature, in view of the finding that it was a disclaimed feature, the learned trial judge held that it likewise could not be an inventive concept; and

(c) in relation to the installation method, the learned trial judge considered that it was just a guideline for the SPIND Floor Gully/Trap and made no contribution towards the advancement of technology.

**[17]** Additionally, the learned trial judge held that MY-567 was not an invention within the meaning of s 12(1) of the Patents Act 1983. The learned trial judge made the following findings in relation to the reparability feature:

(a) there was no evidence of a specific problem that 'the floor gully/traps would become broken during installation or during use and when that happened, the entire trap had to be removed from the floor in which it was located and replaced and that it would be very time-consuming and involved arduous exercise';

(b) even assuming that there was such a problem, it was only a problem relating to the specific existing product and not generally in the field of technology; and

(c) the reparability feature was only good on paper but was unachievable in practical application.

*At the Court of Appeal*

**[18]** Aggrieved, the appellant appealed to the Court of Appeal. The appeal was unanimously dismissed.

**[19]** In respect of the expert evidence, the Court of Appeal rejected the appellant's contention that the High Court erred in relying substantially on the opinion of DW3, who was not independent and not a person having ordinary skill in the art. It was held that the court can construe patent claims without the assistance of persons skilled in the art, and any expert providing such assistance need not approximate a skilled person. Noting that the learned trial judge did not accept DW3's opinion wholesale but considered the evidence of both parties' experts, the Court of Appeal emphasised the role of the court as the ultimate decider.

**[20]** On the issue of novelty, the Court of Appeal affirmed the High Court's decision that MY-567 was not new:

(a) in relation to the fluid tight feature, the Court of Appeal agreed that the feature was anticipated by USP 210; and

(b) in relation to the reparability feature, the appellant sought to distinguish between 'claimed features' for the purpose of assessing novelty and 'inventive concepts' for the purpose of assessing inventiveness. It was argued that reparability was never claimed as a feature in MY-567 in the first place, and thus cannot destroy the novelty of the invention. The Court of Appeal however held that the appellant was bound by their amended statement of claim, which described reparability as a feature of MY-567. Since the reparability feature was disclaimed, the Court of Appeal found that the appellant had failed to define clearly and with precision the monopoly claimed.

**[21]** On the issue of inventive step, the Court of Appeal agreed with the High Court that MY-567 was lacking in inventive step with reference to the following features:

(a) in relation to the fluid tight feature, which was found to be present in USP 210, the Court of Appeal dismissed as misconceived the contention that the feature was inventive or not obvious to the notional man skilled in the art; and

(b) in relation to the reparability feature, the Court of Appeal quoted the High Court's reliance on Windsurfing and noted the High Court's finding that the feature being disclaimed could not be an inventive concept.

**[22]** The Court of Appeal concluded that there was no cogent reason to disturb the specific findings by the High Court that MY-567 was not new, lacking in inventive step, and not industrially applicable but only good on paper.

PRELIMINARY ISSUE

*Statutory framework*

**[23]** It is convenient at the outset to outline the general framework in the Patents Act 1983 in respect of the validity of patents. Section 11 sets out the requirements for a patentable invention:

> 11 Patentable inventions
>
> An invention is patentable if it is new, involves an inventive step and is industrially applicable.

**[24]** Section 56 enumerates the grounds on which a court may invalidate a patent:

> 56 Invalidation of patent
>
> (1) Any aggrieved person may institute Court proceedings against the owner of the patent for the invalidation of the patent.
>
> (2) The Court shall invalidate the patent if the person requesting the invalidation proves —
>
> (a) that what is claimed as an invention in the patent is not an invention within the meaning of section 12 or is excluded from protection under section 13 or subsection (1) or is not patentable because it does not comply with the requirements of sections 11, 14, 15 and 16;
>
> (b) that the description or the claim does not comply with the requirements of section 23; ...

**[25]** Under s 56(2)(a), the court may invalidate a patent if any one of the requirements for a patentable invention are not met, including where the patent:

(a) is not an invention (within the meaning of s 12);

(b) is not novel (s 13);

(c) does not involve an inventive step (s 15); or

(d) is not industrially applicable (s 16).

*Submissions*

**[26]** Counsel for the respondents characterised this appeal as an academic exercise or an exercise in futility, for it will not have the effect of reversing the decision of the High Court regardless of the outcome on all questions of law posed. According to the respondents' counsel, the High Court invalidated the patent on five grounds:

(i) lack of novelty;

(ii) lack of inventive step;

(iii) not an invention;

(iv) not industrially applicable; and

(v) non-compliance with the Patent Regulations 1986, in particular r 12 in relation to the manner and content of a patent description.

**[27]** Counsel for the respondents described grounds (i) and (ii) above as the 'main grounds' articulated in the High Court decision, and grounds (iii)–(v) as being either expressly stated or by necessary implication. Given that the questions of law relate only to the requirement of an inventive step, counsel argued, the appellant's patent will still stand invalidated on account of other grounds of invalidation. As such, counsel invited this court to decline to entertain this appeal.

**[28]** In response, it was argued on behalf of the appellant that the issue of an academic exercise has already been ventilated before this court at the stage of considering whether to grant leave to appeal. In light of the dearth of cases dealing with important aspects of Malaysian patent law, counsel contended that the leave panel must have been satisfied that the appeal falls within the ambit of s 96 of the Courts of Judicature Act 1964. In any event, counsel for the appellant disputed that grounds (iii)–(v) relied upon by the respondents did not form part of the High Court decision. Further, it was contended that the scope of the leave questions necessitated discussions on the issues of expert evidence and novelty. As such, it was submitted that this court ought to proceed to determine the questions in this appeal.

*Scope of questions of law*

**[29]** The starting point in determining the scope of this appeal is r 47(4) of the Rules of the Federal Court 1995:

> Rule 47 Appeal to be by notice
>
> (4) The hearing of the appeal shall be confined to matters, issues or questions in respect of which leave to appeal has been granted.

**[30]** The appeal should be confined only to the questions as determined by this court in granting leave to appeal, and other grounds which are necessary to decide on those questions. As this court has held in *Sababumi (Sandakan) Sdn Bhd v Datuk Yap Pak Leong* [1998] 3 MLJ 151 at p 173:

> Under r 108(1)(c) of the Rules of the Federal Court 1995, the Federal Court may determine or frame the questions or issue which ought to be heard in the appeal; in my view, this discretionary power given statutorily must be given effect to. In other words, only the issues or questions thus framed would be heard or entertained.
>
> The approach I would adopt when it is disputed whether any stated ground in the said memorandum of appeal is outside or not the scope of issues that the Federal Court framed in granting leave is whether such ground is, prima facie, necessary to enable the court to decide the said issue with precision. If it is not, the ground is thus outside the scope.

**[31]** The parties should confine their submissions to the questions of law posed, and are not entitled to seek a complete rehearing to review the concurrent findings of fact made by the courts below. In *Ho Tack Sien & Ors v Rotta Research Laboratorium SpA & Anor (Registrar of Trade Marks, intervener)* [2015] 4 MLJ 166 at para [22], this court held that:

> The submissions advanced by learned counsel for the defendants in support of those issues are in effect seeking a reversal of the findings of facts in this case on the infringement of the trademark by the defendants with the resultant consequential orders. *In our view this would result in a complete re-hearing of the appeal on those issues and would be a complete disregard to the provision of s 96(a) of the Courts of Judicature Act 1964 when leave to appeal to this court was granted. The two questions posed before this court when leave was granted have been couched to incorporate a point of law which if answered in the affirmative or negative has the effect of reversing the conclusions made by the Court of Appeal without any further evaluation of the evidence. It is the answers to those questions which must have the effect of reversing the conclusions made by the Court of Appeal and not the result of a review of the concurrent findings of facts made earlier on.* The questions posed must also relate to a matter in respect of which a determination has been made by the Court of Appeal (see the case of *Meidi-Ya Co Ltd, Japan & Anor v Meidi (M) Sdn Bhd* [2009] 2 MLJ 14). *We therefore rule that the defendants should only be allowed to confine their arguments on the two questions of law posed before this court.* (Emphasis added.)

**[32]** It is undisputed that all three questions of law relate to the requirement of inventive step. Where the parties' counsel diverge is whether the ambit of the questions also includes the issues of expert evidence and novelty.

Expert evidence

**[33]** The first question is whether the court should adopt the *Windsurfing* test for inventiveness. As will be elaborated below, one of the steps in the

*Windsurfing* test requires the identification of a person skilled in the art.

**[34]** However, we note that the leave panel has rejected other specific questions of law posed by the appellant on the issue of expert evidence in general, in particular:

(a) whether in construing a patent the court is required to be guided by, and should only take into consideration, the opinion of independent witnesses who come as persons skilled in the relevant art;

(b) whether an interested party who is not skilled in the art should be allowed to give expert evidence on the construction and validity of a patent; and

(c) the admissibility and weight to be accorded to opinions by witnesses who are not skilled in the art.

**[35]** In this premise, following *Ho Tack Sien*, the appellant is not entitled to seek a complete review of the expert evidence in this case by purporting to subsume the matter within the first question. In our answer to the first question, the issue of evidence by persons skilled in the art will be dealt with in so far as is necessary to elucidate the test for assessing inventiveness.

Novelty

**[36]** The second question concerns the distinction, if any, between determining the 'claimed features' of a patent for the purpose of assessing novelty and infringement, and its 'inventive concepts' for the purpose of assessing inventiveness. The question relates to the appellant's contention that since reparability is an 'inventive concept' but not a 'claimed feature' of MY-567, it should not have been considered in assessing novelty.

**[37]** We note that the leave panel also rejected a separate question on novelty posed by the appellant, which reads: 'whether for the purpose of assessing novelty, an assumption that is not disclosed clearly and unmistakably in the prior art can be used to render the invention in a patent not novel'. The rejected question relates to the appellant's position that the fluid tight feature is novel and not anticipated by USP 210, which the appellant contended has been erroneously interpreted by the courts below.

**[38]** The second question is not a carte blanche for the appellant to re-litigate in entirety the issue of novelty. No leave has been granted to the appellant to challenge the finding that the fluid tight feature is not novel, and no question was posed to raise other purported novel features in MY-567. Our discussion

on the second question will be confined to whether the assessment of both novelty and inventiveness must be based on the claims in a patent.

*Whether this appeal is academic*

**[39]** The learned trial judge expressly summarised the grounds for invalidating MY-567 as follows:

> In the premise, I find that the MY-567 Patent is not an invention within the meaning of s 12(1) of the Patents Act 1983. Added to that the MY-567 Patent is neither novel nor involves inventive steps to qualify it as a patented product. As such, I will allow the defendants' declaration that the MY-567 Patent is invalid and expunged *[sic]* the same from the patent registry.

**[40]** 'Invention' is defined in s 12 of the Patents Act 1983 as 'an idea of an inventor which permits in practice the solution to a specific problem in the field of technology'. In concluding that MY-567 was not an invention, the learned trial judge found that there was no specific problem in the field; that even assuming there was such a problem, it was not a general problem in the field of technology but only related to an existing product; and in any event, that the reparability of MY-567 was unachievable in practical application.

**[41]** In this regard, the learned trial judge relied on the evidence of two witnesses:

(a) the evidence of DW1, that he has never heard or come across anyone buying only the bottom outlet or second portion of the floor trap for the purposes of repair; and

(b) the evidence of DW2, that the only joining method for the bottom outlet to the pipe sleeve was solvent cement, and that once cemented, the bottom outlet was unlikely to be replaced because the portions would have become one unitary piece.

**[42]** The specific findings of the High Court were affirmed by the Court of Appeal. The finding that MY-567 was not an invention was not challenged by the appellant at the Court of Appeal, and no question of law on that point was posed to this court. Neither does the appellant seek to challenge the admissibility of the evidence of DW1 and DW2, on the basis that they were not experts skilled in the art. In the circumstances, we consider that the decision in this appeal will not affect the invalidity of MY-567.

**[43]** We are aware of the general principle that the court does not determine academic questions where the parties are not interested in the result of the appeal (*Ainsbury v Millington* [1987] 1 All ER 929 at p 930; *Sun Life Assurance Co of Canada v Jervis* [1944] AC 111 at pp 113–114). Further, where leave has

been granted, the appellate panel is not prevented from determining the appeal without answering the questions if the questions are academic or serve no purpose (*Terengganu Forest Products Sdn Bhd v Cosco Container Lines Co Ltd & Anor and other applications* [2011] 1 MLJ 25 at para [43]; *Blue Valley Plantation Bhd v Periasamy a/l Kuppannan & Ors* [2011] 5 MLJ 521 at para [24]).

**[44]** The general rule is not without exceptions. In *R v Secretary of State for the Home Dept, ex parte Salem* [1999] AC 450 at p 456, the House of Lords exercised discretion to hear an appeal on a question of public law, even though by the time of the appeal there is no longer an issue which will directly affect the rights and obligations of the parties. More recently, in the case of *Kerajaan Malaysia v Mudek Sdn Bhd* [2017] 5 MLJ 133 at para [2], the fact that the parties have reached an amicable settlement before the appeal was heard did not preclude this court from answering the questions posed, in order to correct and clarify the position of the law stated in the judgment of the Court of Appeal.

**[45]** The paramount consideration is that the matter must involve, in the language of s 96(a) of the Courts of Judicature Act 1964, 'a question of general principle decided for the first time or a question of importance upon which further argument and a decision of the Federal Court would be to public advantage', although these criteria are not exclusive (*Datuk Syed Kechik bin Syed Mohamed & Anor v The Board of Trustees of The Sabah Foundation & Ors and another application* [1999] 1 MLJ 257 at p 261). We are satisfied that the questions in the present appeal are of such a nature.

**[46]** We also note that there is hitherto only one case decided by this court on the requirement of an inventive step (*SKB Shutters Manufacturing Sdn Bhd v Seng Kong Shutter Industries Sdn Bhd & Anor* [2015] 6 MLJ 293). Further clarification and guidance in this area of law are required. In these circumstances, notwithstanding that the invalidity of the impugned patent MY-567 remains unaffected, we will proceed to answer the questions.

INVENTIVE STEP

**[47]** An inventive step is one of the requirements for a patentable invention under s 11 of the Patents Act 1983, and a ground for invalidating a patent under s 56(2)(a) thereof. The concept is defined in s 15 of the Patents Act 1983 as follows:

> An invention shall be considered as involving an inventive step if, having regard to any matter which forms part of the prior art under paragraph 14(2)(a), such inventive step would not have been obvious to a person having ordinary skill in the art.

**[48]** The prior art referred to in s 14(2)(a) consists of 'everything disclosed to the public, anywhere in the world, by written publication, by oral disclosure, by use or in any other way, prior to the priority date of the patent application claiming the invention'.

*Origin*

**[49]** An illuminating account of the historical development of lack of inventive step as a ground for invalidating a patent is found in the Australian High Court decisions in *Lockwood Security Products Pty Ltd v Doric Products Pty Ltd (No 2)* (2007) 235 ALR 202 (at para [48]) and *AstraZeneca AB v Apotex Pty Ltd* [2015] HCA 30 (at paras [11]–[12]). In brief, the requirement of novelty had its origins in the UK Statute of Monopolies 1623, which provided for the grant of letters patent for the 'sole working or making of any manner of new manufactures' to the 'true and first inventor'. The statute did not include a requirement for an inventive step.

**[50]** Lack of inventive step emerged as a separate ground for invalidation, distinct from novelty, from case law under the rubric of 'lack of subject matter' in the late nineteenth century. An invention was not considered the subject matter for a patent if it is merely the application of a known article to an analogous purpose without any ingenuity (*Morgan & Co Ltd v Windover & Co Ltd* (1890) 7 RPC 131). The requirement of obviousness was considered by the House of Lords in *Vickers, Sons & Co Ltd v Siddell* (1890) 15 App Cas 496 at pp 501–502:

> And the question remains, whether this mode of dealing with forgings which require to be gradually turned was *so obvious that it would at once occur to anyone acquainted with the subject, and desirous of accomplishing the end, or whether it required some invention to devise it.* (Emphasis added.)

**[51]** The requirement for an inventive step was first incorporated into statute in the UK Patents and Designs Act 1932, which recognised a ground for revoking a patent where the invention 'is obvious and does not involve any inventive step having regard to what was known or used prior to the date of the patent'. The current formulation is stated in s 3 of the UK Patents Act 1977:

> An invention shall be taken to involve an inventive step if it is not obvious to a person skilled in the art, having regard to any matter which forms part of the state of the art by virtue only of section 2(2) above (and disregarding section 2(3) above).

**[52]** In Malaysia, prior to the enactment of the Patents Act 1983, the registration of patents had to be obtained from the Patents Office in the UK, under three different laws for Semenanjung Malaysia, Sabah, and Sarawak. The Patents Act 1983 was introduced for the purpose of abolishing the colonial

system in favour of a single unified system of patent registration in Malaysia, while preserving the fundamental principles consistent with patent laws in other jurisdictions (per the statement by the Deputy Minister of Trade and Industry at the second reading of the Patents Bill, *Hansard* report for the House of Representatives dated 25 July 1983). The statutory requirement of an inventive step in section 15 of the Malaysian Patents Act 1983 is in pari materia with the relevant legislation in the UK, Australia, and Singapore.

*Rationale*

**[53]** The inventive step requirement reflects the balance of policy considerations in patent law: to encourage and reward inventors, without inhibiting improvements of existing technology by others (*Lockwood* at para [48], High Court of Australia). The rationale underpinning the notion of an inventive step was articulated by Laddie J in *Brugger and others v Medic-Aid Ltd* [1996] RPC 635 at p 639:

> *The policy behind the law in this area is that one trader should not be prevented by a statutory monopoly from doing something which, at the date of the patent, is obvious. A trader must be free to adopt a product, process or design which is the, or one of the, obvious modifications over what has gone before without the need to look over his shoulder to consider whether it is protected by patent.* Obviousness is tested against the mental and developmental norm of a notional uninventive person skilled in the art. In doing that the law is protecting not only established businesses which may wish to adopt new products, processes or designs or modify existing ones but also the new entrant who has employed persons skilled in the art to help him get into the market. Each of those categories of trader must be free to adopt what is obvious. (Emphasis added.)

**[54]** In other words, per Millett LJ in *PLG Research Ltd and another v Ardon International Ltd and others* [1995] RPC 287 at pp 313–314:

> ... the public should not be prevented from doing anything which was merely an obvious extension or workshop variation of what was already known at the priority date.

**[55]** It is in line with this policy that the question of inventive step falls to be determined. The underlying question, as formulated by Hoffmann LJ in *Société Technique De Pulverisation Step v Emson Europe Ltd and others* [1993] RPC 513 at p 519, is this:

> The words 'obvious' and 'inventive step' involve questions of fact and degree which must be answered in accordance with the general policy of the Patents Act to reward and encourage inventors without inhibiting improvements of existing technology by others. *The question is therefore whether in accordance with this policy the patent discloses something sufficiently inventive to deserve the grant of a monopoly.* (Emphasis added.)

**[56]** Thus in assessing obviousness, an opposite balance must be struck between encouraging and stifling innovation (*First Currency Choice Pte Ltd v Main-Line Corporate Holdings Ltd and another appeal* [2008] 1 SLR 335 at para [51]). The need for this balance was highlighted in vivid terms in *Cipla Ltd v Glaxo Group Ltd* [2004] RPC 843 at para [41]:

> It is a question of fact in every case. Both the Scylla of considering nothing obvious except that to which the skilled man is driven and the Charybdis of considering every invention obvious that can be decomposed into a sequence of obvious steps must be avoided. The former is unfair to industry because it stifles natural development. The latter is unfair to inventors and not countenanced by English patent law ...

*Distinction from novelty*

**[57]** It bears emphasis that an inventive step is a requirement distinct from, and in addition to, novelty. Logically, the question of inventiveness only arises where the invention is novel; where an invention is held to be anticipated by prior art, any assessment on obviousness would be inherently conjectural (per Jacob LJ in *Rockwater v Technip France SA and another* [2004] EWCA Civ 381 at para [114]). As explained by the Singaporean Court of Appeal in *Genelabs Diagnostics Pte Ltd v Institut Pasteur & Anor* [2001] 1 SLR 121 at para [51]:

> This requirement, which is termed as the question of obviousness, is distinct and separate from novelty. An invention lacks novelty if it is shown that the patent claimed includes within its scope something which has previously been made available to the public. On the other hand, *in considering the question of obviousness, it is assumed that the invention is novel and differs in some identifiable respect from the prior art.* (Emphasis added.)

**[58]** Against this background and in light of these considerations, we now consider the questions of law in this appeal.

## QUESTION 1: THE WINDSURFING TEST

**[59]** Question 1 in this appeal reads:

> Whether for the purpose of considering whether a patented invention is inventive (or not obvious), the court is required to apply and carry out the 4-steps test from the case of *Windsurfing International Inc v Tabur Marine (Great Britain) Ltd* [1985] RPC 59 (or more commonly known as the '*Windsurfing* test') — ... (quote omitted.)

*Submissions*

**[60]** The appellant's counsel submitted that the question should be answered in the affirmative. The *Windsurfing* test, it was asserted, provides a structured

approach and is supported by a long line of authorities both local and foreign. Counsel argued that the High Court failed to apply the first two steps of the test, namely the identification of the inventive concept and the assumption of the mantle of a person skilled in the art. In particular, it was contended that the reparability advantage and the installation method of the floor trap ought to have been identified as inventive concepts of MY-567.

**[61]** The respondents' counsel did not seek to dispute the applicability of the *Windsurfing* test. However, it was submitted that the question is based on the false assumption that the High Court and the Court of Appeal did not apply the test. Counsel for the respondents contended that since the courts below have in fact expressly referred to and applied the test, the question is abstract, academic or hypothetical and thus should not be answered by this court.

**[62]** In the circumstances, we will consider whether the test expounded in *Windsurfing* ought to be adopted in the first place, before analysing the correctness of the approach taken by the learned trial judge.

*The Windsurfing case*

**[63]** The disputed patent in *Windsurfing* relates to a basic equipment for a wind-propelled vehicle, comprising a sail attached to an unstayed spar and held taut between a pair of arcuate booms. In an action for infringement of the patent by the plaintiff, the defendants counterclaimed for its revocation on the grounds of lack of novelty and lack of inventive step.

**[64]** The novel feature in the invention was that the spar was not stayed, but was free to move under the direct manual control of the user. The applicable statutory provision in that case was s 32(1)(f) of the UK Patents Act 1949, which provided that a patent may be revoked if 'the invention, so far as claimed in any claim of the complete specification, is obvious and does not involve any inventive step having regard to what was known or used, before the priority date of the claim, in the United Kingdom'. Delivering the judgment of the English Court of Appeal, Oliver LJ propounded the four-step test to determine the question of obviousness in the classic passage below (at pp 73–74):

> There are, we think, four steps which require to be taken in answering the jury question. The first is to identify the inventive concept embodied in the patent in suit. Thereafter, the court has to assume the mantle of the normally skilled but unimaginative addressee in the art at the priority date and to impute to him what was, at that date, common general knowledge in the art in question. The third step is to identify what, if any, differences exist between the matter cited as being 'known or used' and the alleged invention. Finally, the court has to ask itself whether, viewed

A without any knowledge of the alleged invention, those differences constitute steps which would have been obvious to the skilled man or whether they require any degree of invention.

B **[65]** His Lordship proceeded to apply the test to the facts. The analysis may be summarised as follows:

(a) at step 1, the free-sail concept was identified as the inventive concept, being 'that which constitutes the essential difference between the patent in suit and other conventional vehicles propelled by sail';

C (b) at step 2, the common general knowledge of any person familiar with sailing and sailing craft at the priority date would include a form of sail known as the Bermuda rig, a form of twin arcuate booms known as the wishbone boom. In addition, an 1966 article published in an American journal had disclosed a free-sail concept to persons knowledgeable in the art;

D

(c) at step 3, the only difference between the devices disclosed in the impugned patent and the journal article was that the patent envisaged a Bermuda rig held by a wishbone boom, whereas the journal described a kite rig held by a crossed spar and boom; and

E

(d) at step 4, anyone skilled in the art would immediately recognise the disadvantages of the kite rig, which would disappear if a Bermuda rig was used instead, and also recognise that the change to a Bermuda rig would require the sails to be stretched by a wishbone boom. Since the adoption of a Bermuda rig was an obvious way of improving the device disclosed in the journal article, the impugned patent was held not to involve any inventive step.

F

G **[66]** Oliver LJ also considered the obviousness of the invention in relation to another piece of prior art: a sailboard made in 1958 by a 12-year-old boy, Chilvers, and used by him for sailing over two summer seasons at an island. The description of the sailboard clearly constituted an anticipation of the patent in suit in respect of all essential features, except the arcuate booms. Assuming that

H the sailboard was not an anticipation of the disputed patent, the court nevertheless found that the use of a wishbone boom, being the only feature of material difference, would have been obvious and did not involve an inventive step. The limited, fairly distant and relatively isolated prior use of the Chilvers device was held to be no barrier to establishing obviousness. The explanation

I by Oliver LJ (at p 77) reflects the general policy considerations underlying patent law:

> ... the notion behind anticipation is, as we understand it, that it would be wrong to enable the patentee to prevent a man from doing what he has lawfully done before the patent was granted. No doubt, the philosophy behind sub-paragraph (f) is

different to this extent, that a patent is granted only for an invention and that which is obvious is not inventive, but it also must, we think, take into account the same concept as anticipation, namely that *it would be wrong to prevent a man from doing something which is merely an obvious extension of what he has been doing or of what was known in the art before the priority date of the patent granted*. (Emphasis added.)

*Judicial attitudes towards the Windsurfing test*

**[67]** Prior to the *Windsurfing* test, the existence of an inventive step was determined by reference to a collection of various factors. For instance, the route to determine obviousness was described in *The General Tire & Rubber Company v The Firestone Tyre and Rubber Company Limited and others* [1972] RPC 457 at pp 495–496:

When head (f) is invoked it is, of course, as previously indicated, for whoever seeks revocation of a patent to show that the alleged inventive step was obvious to a normally skilled addressee in the art. On the way to that end there are here a number of preliminary questions to be resolved. These include the common general knowledge to be imputed to that addressee; whether what had to be done to achieve the step was truly a matter of inventive experiment or merely a matter of that type of trial and error which forms part of the normal industrial function of such an addressee; what documents he would find in the course of such researches as he would be expected to make; and how he would regard those documents in the light of common general knowledge. Then finally one has to consider whether the step is properly described as a new combination of integers or merely as a collocation of old ones. None of these questions, some of which inevitably overlap, is easy to resolve, and on each it is for the appellants to establish their contentions.

**[68]** The introduction of a structured test in *Windsurfing* was endorsed in the UK as a helpful approach (*Rockwater v Technip France SA and another* [2004] EWCA Civ 381 at para [111]). Sir Nicholls V-C acknowledged the continued utility of the test in the seminal case of *Molnlycke AB and another v Procter & Gamble Limited and others (No 5)* [1994] RPC 49 at p 114:

Although formulated with reference to the Patents Act 1949, the analysis of Oliver LJ in *Windsurfing International v Tabur Marine* [1985] RPC 59 at p 73 continues to provide assistance. The value of this analysis is not that it alters the critical question; it remains the question posed by the Act. But it is that *it enables the fact-finding tribunal to approach the exercise of answering that question in a structured way*. (Emphasis added.)

**[69]** In *Novo Nordisk A/S v DSM NV* [2000] All ER (D) 2420; [2001] RPC 35 at para [58], Neuberger J affirmed the merits of the *Windsurfing* test as the appropriate approach:

> ... not merely because it has been approved and applied in a number of previous cases, including in the Court of Appeal. It is also because it ensures that one does not go straight to the question of obviousness by reference to a general impression as to the evidence as a whole. *By adopting the structured approach, one ensures that there is a measure of discipline, reasoning and method in one's approach. Indeed, it helps to ensure that there is consistency of approach in different cases involving the issue of obviousness*. (Emphasis added.)

**[70]** The danger of not using the structured approach was highlighted by the Court of Appeal in England in *Wheatley and another v Drillsafe Ltd and others* [2000] All ER (D) 926; [2001] RPC 133 (at paras [45]–[54]). Overturning the decision of the Patents Court on inventiveness, the court held that the failure to adopt the *Windsurfing* test had led the trial judge to err in failing to distinguish between what was actually known and what was part of the common general knowledge, and in falling into the trap of hindsight reasoning.

**[71]** A reformulated version of the test was offered by Jacob LJ in the English Court of Appeal case of *Pozzoli SPA (a company incorporated under the laws of Italy) v BDMO SA (a company incorporated under the laws of Belgium) and another* [2007] EWCA Civ 588 at para [23]:

> (1)(a) Identify the notional 'person skilled in the art';
>
> (b) Identify the relevant common general knowledge of that person;
>
> (2) Identify the inventive concept of the claim in question or if that cannot readily be done, construe it;
>
> (3) Identify what, if any, differences exist between the matter cited as forming part of the 'state of the art' and the inventive concept of the claim or the claim as construed;
>
> (4) Viewed without any knowledge of the alleged invention as claimed, do those differences constitute steps which would have been obvious to the person skilled in the art or do they require any degree of invention?

**[72]** The reasoning behind the restatement was explained (at paras [4]–[17]). The order of the first two steps was reversed, for the inventive concept can only be identified based on what a skilled person would understand the patent to have meant. The rearranged first step also involves two steps, namely the identification of the attributes of a notional person skilled in the art and the common general knowledge of such a person.

**[73]** The *Windsurfing* test has also been applied by the apex court in Singapore (see *Merck & Co Inc v Pharmaforte Singapore Pte Ltd* [2000] 3 SLR 717 at para [50], *Genelabs Diagnostics Pte Ltd v Institut Pasteur & Anor* [2001] 1 SLR 121 at para [52] and *Peng Lian Trading Co v Contour Optik Inc and*

*others* [2003] 2 SLR 560 at para [17]). However, the Singapore Court of Appeal has tended to adopt a more reticent attitude towards the test in recent times. A useful analysis was given in *First Currency Choice* (subsequently quoted with approval in *Mühlbauer AG v Manufacturing Integration Technology Ltd* [2010] 2 SLR 724 at p 737). VK Rajah JA first outlined the criticisms of the *Windsurfing* approach (at para [43]):

> In this respect, *the Windsurfing test (para [41] above) has been criticised for over-elaborating the statutory definition of 'inventive step' without reducing the confusion and uncertainty that has long been associated with it. David I Bainbridge in Intellectual Property (Pearson, 6th Ed, 2007) at p 400 contends that the first three steps of the Windsurfing test are, in reality, redundant*. He notes that s 3 of the Patents Act 1977 (c 37) (UK) ('the 1977 English Act') (which is equivalent to s 15 of the Act) seems straightforward and requires a one-step test only, namely, whether the alleged invention is 'not obvious to a person skilled in the art'. The *Windsurfing* test, in Bainbridge's view, does not provide any intrinsic guidance on the statutory provision itself, but 'merely affords a structured method of assessing whether the requirement of inventive step has been satisfied' (see *Intellectual Property* at p 400). Bainbridge further cautions that in breaking down the test in s 3 of the 1977 English Act, there is a latent danger that artificiality will be introduced, which might distort the test. *He persuasively suggests (ibid) that a simpler formulation is to ask:*
>
> > *[W]hether, from the point of view of a person who had total knowledge of the state of the art, the invention was obvious at the priority date.* It goes without saying that the person concerned cannot be endowed with inventive faculties ...
>
> It is also pertinent to note that the European Patent Office does not appear to have adopted a structured approach along the lines of the *Windsurfing* test in determining whether an invention involves an inventive step. (Emphasis added.)

**[74]** Nevertheless, the Singaporean Court of Appeal observed that the *Windsurfing* test 'appears to be here to stay'. The court discussed the advantages of the structured approach in *Windsurfing* with reference to the cases of *DSM NV* and *Wheatley* (discussed above), and opined that (at para [44]):

> When all is said and done, the *Windsurfing* approach has its advantages. The first three steps of this test lay the ground work for the final question — which is ultimately the only critical question — namely: Is the alleged invention obvious?

**[75]** Balancing the above considerations, the Court of Appeal in Singapore concluded that that the *Windsurfing* test should be regarded as no more than a useful guide (at para [45]):

> Be that as it may, simplicity is certainly to be appreciated, and, in assessing the obviousness of an alleged invention, it may sometimes suffice in straightforward cases to refer to the test formulated by Lord Herschell in *Vickers, Sons And Co, Limited v Siddell* (1890) 7 RPC 292 where he stated (at 304) that an invention lacked an inventive step if what was claimed was 'so obvious that it would at once occur to anyone acquainted with the subject, and desirous of accomplishing the

A end'. *Quite often, it is difficult, in practice, to break down the Windsurfing test (para [41] above) into its component parts. Thus, while the Windsurfing test remains a useful guide, it is no more than that.* Above all, it should be borne in mind that the *Windsurfing* test is merely a manifestation of judicial inventiveness on how best to pragmatically interpret and elucidate the requirements of s 15 of the Act. (Emphasis added.)

B

*Our decision on question 1*

**[76]** We find merit in the *Windsurfing* test as a good starting point for C analysing the issue of inventive step. The structured test offers a useful framework for considering the various factors involved in the assessment, and provides some clarity of reasoning and consistency of approach. That said, we agree with the caution noted in *First Currency Choice* against over-elaborating the statutory requirement. While the four-step test will be a helpful guide in D most cases, the individual steps should not be taken as set in stone and mechanically applied, especially where the evaluation of a straightforward factual scenario may be derailed by ancillary debates on niceties. The court must always bear in mind that the ultimate question, expressed in s 15 of the Patents Act 1983 and contained in the fourth and final step, is simply whether E the invention is obvious to a person having ordinary skill in the art, having regard to the prior art.

**[77]** The reformulation in *Pozzoli* does not purport to alter the basic principles in the *Windsurfing* test. Properly understood, we consider the F relative simplicity of the original *Windsurfing* test sufficient and advantageous, and thus find it unnecessary to adopt the restated version of the test in *Pozzoli*. With only changes in terminology to mirror s 15 of the Patents Act 1983, the *Windsurfing* test for determining inventiveness in the Malaysian context is set out as follows:

G

(1) identify the inventive concept embodied in the patent;

(2) assume the mantle of person having ordinary skill in the art, and impute to him the common general knowledge at that date;

H (3) identify the differences between the prior art and the alleged invention; and

(4) determine whether, viewed without any knowledge of the alleged invention, those differences constitute steps which would have been obvious to the person having ordinary skill in the art.

I

**[78]** The principles embedded in each step of the *Windsurfing* test are well-established. Step 1 requires the identification of the inventive concept, which is the core or essence of the invention (*Generics (UK) Ltd and others v H Lundbeck A/S* [2009] UKHL 12 at para [30]). At this stage, one does not take

into account the prior art: 'you are not at this point asking what was new' (*Pozzoli* at para [21]). The meaning of an inventive concept and the method of identification will be further elaborated in our discussion on questions 2 and 3 below.

**[79]** Step 2 requires the court to assume the mantle of the notional person having ordinary skill in the art, akin to the concept of a hypothetical skilled but unimaginative addressee in the UK. The attributes of such a person are settled: he 'must be assumed to be of standard competence at his work without being an imaginative or inventive turn of mind' (*General Tire* at p 502). The person is characterised by Lord Reid in *Technograph Printed Circuits Limited v Mills & Rockley Electronics) Limited* [1972] RPC 346 at p 355 in the following terms:

> To whom must the invention be obvious? It is not disputed that the hypothetical addressee is a skilled technician who is well acquainted with workshop technique and who has carefully read the relevant literature. He is supposed to have an unlimited capacity to assimilate the contents of, it may be, scores of specifications but to be incapable of a scintilla of invention.

**[80]** Step 3 requires the court to ascertain differences between the prior art and the alleged invention. Where the identification of the inventive concept in isolation from the prior art gives rise to unnecessary difficulties at step 1, Jacob LJ suggested (*Pozzoli* at para [19]) that the court should focus instead on the differences in step 3:

> In some cases the parties cannot agree on what the concept is. If one is not careful such a disagreement can develop into an unnecessary satellite debate. In the end what matters is/are the difference(s) between what is claimed and the prior art. It is those differences which form the 'step' to be considered at stage (4). So if a disagreement about the inventive concept of a claim starts getting too involved, the sensible way to proceed is to forget it and simply to work on the features of the claim.

**[81]** Step 4 is the final and crucial stage of the analysis, embodying the all-important question of obviousness. The terminology was explained in *Re Beecham Group Ltd's (Amoxycillin) Application* [1980] RPC 261 at p 290:

> Obviousness and inventiveness are antitheses. What is obvious cannot be inventive, and what is inventive cannot be obvious.

**[82]** It is trite that the test of whether the step was obvious to the skilled person is an objective one (*Molnlycke* at p 111) and a question of fact (*Technograph* at p 355). The court should be wary of the danger of hindsight. Per Fletcher-Moulton LJ in *British Westinghouse Electric and Manufacturing Co v Braulik* (1910) 27 RPC 209 (quoted with approval by the House of Lords in *Non-Drip Measure Coy Ld v Stranger's Ld and Others* [1943] RPC 135 at p

142):

> I confess that I view with suspicion arguments to the effect that a new combination, bringing with it new and important consequences in the shape of practical machines, is not an invention, because, when it has once been established, it is easy to show how it might be arrived at by starting from something known, and taking a series of apparently easy steps. This ex post facto analysis of invention is unfair to the inventors, and in my opinion it is not countenanced by English patent law.

**[83]** At this stage, the court may have regard to two types of evidence, primary and secondary. The primary evidence is the opinion of expert witnesses. The assistance of expert evidence is 'almost invariably' required (*Molnlycke* at p 112), 'generally valuable and often necessary' (*Technograph* at p 356) to reach findings of fact on obviousness. However, while expert opinion is admissible on the ultimate question of fact, it by no means follows that the court is bound to follow it (*Technip France* at para [14]).

**[84]** Crucially, there is no requirement for an expert witness to approximate to the notional skilled person. It is the reasons for the expert's opinion that matter, and such reasons do not depend on how closely the expert resembles the skilled man. The hypothetical skilled man, 'if real, would be very boring — a nerd' (*Technip France* at para [7]). Noting how the skilled man's characteristic of being uninventive is used to attack the evidence of an expert, along the general theme of 'my witness is more nerdlike than his', Jacob LJ stressed that the approach is unhelpful in *Technip France* at para [12]:

> I must explain why I think the attempt to approximate real people to the notional man is not helpful. It is to do with the function of expert witnesses in patent actions. *Their primary function is to educate the court in the technology — they come as teachers, as makers of the mantle for the court to don. For that purpose it does not matter whether they do or do not approximate to the skilled man*. What matters is how good they are at explaining things. (Emphasis added.)

**[85]** The principle in *Technip France* was applied by this court in *SKB Shutters Manufacturing Sdn Bhd v Seng Kong Shutter Industries Sdn Bhd & Anor* [2015] 6 MLJ 293 at para [58]:

> ... the general principles relating to the construction of patent claims and the role to be played by the 'experts' are well-established. The function of the expert is to educate the court in technology and that they come as teachers, as makers of the mantle for the court to don. For that purpose it does not matter if they do not approximate a person skilled in the art (see the case of *Technip France SA's Patent*). *As such, clearly the court can construe patent claims without the assistance of a person skilled in the art.* Any assistance required is from an expert and he need not approximate a skilled person. (Emphasis added.)

**[86]** Read in context and with reference to *Technip France*, it is clear that the

underlined statement above meant that the court may construe patent claims without the assistance of an expert who approximates the *hypothetical* person skilled in the art, all his attributes and dispositions included. Although the observation in *SKB Shutters* was made in the context of the construction of claims, the principles elucidated are of a general nature and are equally applicable in determining whether there is an inventive step.

**[87]** Secondary evidence includes contemporary events and the commercial success of the alleged invention. The relevance of commercial success to the evaluation of inventiveness was succinctly explained in Ng-Loy Wee Loon, *Law of Intellectual Property of Singapore* (Sweet & Maxwell Asia, Rev Ed, 2009), quoted with approval by the Singapore Court of Appeal in *Mühlbauer* at para [107]:

> Commercial success enjoyed by the patented invention may also indicate that the invention was not obvious. *The reason why commercial success can be [a] relevant factor has been explained in this way: commercial success is an indication that the patented invention meets a long-felt need in the industry and, if the invention was obvious, why was it not done before?* However, commercial success is not conclusive of the non-obviousness of the invention. The inventor who is relying on this factor must convince the tribunal that the commercial success of the patented invention is credited to the invention itself, and not because of other factors such as clever advertising gimmicks. (Emphasis added.)

**[88]** Secondary evidence is not in itself conclusive on the question of obviousness, and care should be taken in attaching proper weight to such evidence (*Molnlycke* at p 112):

> Secondary evidence of this type has its place and the importance, or weight, to be attached to it will vary from case to case. However, such evidence must be kept firmly in its place. It must not be permitted, by reason of its volume and complexity, to obscure the fact that it is no more than an aid in assessing the primary evidence.

**[89]** Given that the question of obviousness at step 4 is one of fact, reliance on the application of the test to particular facts in previous authorities is not helpful, as warned by Sir Nicholls V-C in *Molnlycke* at p 113:

> In *Savage v Harris*, Lopes LJ sounded a salutary warning:
>
> > Cases, so far as regards the law, are most useful, but when they are applied to particular facts, they, as a rule, are of little service. Each case depends upon its own particular facts and the facts of almost every case differ.
>
> Citing previous decisions on a question of fact is not a useful, nor is it a proper, exercise.

**[90]** In accordance with these principles and subject to the reservations

A expressed earlier, we agree that the *Windsurfing* test should be generally applied for the purpose of considering whether an alleged invention is inventive. We answer the first question in the affirmative. We will consider the application of the test to the facts in the present appeal after dealing with questions 2 and 3.

B QUESTIONS 2 AND 3: INVENTIVE CONCEPT

**[91]** Questions 2 and 3 are interrelated. Question 2 reads:

> Whether there is a distinction to be drawn between determining the 'claimed features' of the claims of a patent (for the purposes of assessing novelty and infringement) and determining the 'inventive concepts' of the invention in the patent (for the purpose of assessing inventiveness)?

C

**[92]** Question 3 reads:

D
> If the answer to Question 2 is in the affirmative, whether an assessment of the 'inventive concepts' of the invention is to be confined to just the claims of the patent or should be construed from reading the patent specifications as a whole and with the common knowledge of the skilled person?

E *Submissions*

**[93]** Counsel for the appellant submitted that the distinction between determining 'claimed features' for assessing novelty and infringement, and 'inventive concepts' for assessing inventiveness, is that the latter does not need
F to be expressly stated in the claims of the patent. It was argued that an inventive concept is the advance in the art that the patent asserts to have been made; it should be discerned from the patent specifications as a whole, including the claims, description, and drawings.

G **[94]** On the facts, counsel for the appellant argued that the reparability advantage is an inventive concept, being an advantageous effect produced from the interworking of the three portions of the floor trap. It was highlighted that reparability is mentioned in the 'Background' section in the description of MY-567. It was never the appellant's case that reparability formed part of the
H claims in MY-567. Counsel submitted that in dismissing both the novelty and inventiveness of MY-567 on the basis that the reparability feature is not claimed, the learned trial judge had confused claimed features with inventive concepts, and conflated the two issues of novelty and inventiveness.

I **[95]** On behalf of the respondents, it was argued that the question 3 is premised upon question 2, which is in turn premised upon question 1. Given that question 1 is based on the erroneous factual premise that the courts below did not apply the *Windsurfing* test, it was contended, the two subsequent questions are likewise misplaced and misconceived. Counsel for the

respondents also pointed out that the questions have already been unequivocally answered by this court in *SKB Shutters*: it is the claims alone that must be considered by the court in determining whether an invention lacks inventive step. As such, the respondents' position is that none of the questions posed merit any determination by this court.

*Claims in a patent*

**[96]** It is imperative first to understand the purpose of claims in a patent, and how they came to be incorporated as part of a patent specification. Fletcher Moulton LJ's account in *British United Shoe Machinery Co Ltd v A Fussell & Sons Ltd* (1908) 25 RPC 631 at p 650 is instructive:

> As it is the duty of the inventor to give the fullest practical information to the public he is bound to put in, if for instance the invention is a process, quantities and times which are the best he knows. But it would be very cruel to hold him to the invention when carried out only with those best quantities and times, because a person could then take his invention in substance if he did not take it in quite the best way, and the value of the grant would be practically nothing. *Hence inventors, in their own protection, took to introducing into their specifications language intended to distinguish between that which was there for the practical information of the public, and that which was there for delimitation of the invention*. Correct delimitation was of the greatest possible importance to the inventor, because if his Patent covered something which was old the Patent was wholly bad. At the same time there was the danger of confining himself to a mere outline which gave delimitation, but did not tell the public the best way within those limits of performing his invention. *The one duty required him to state his invention in its most general form, and the other duty required him to state it in its best and therefore in a very special form.*
>
> *Out of that has arisen the practice, which originally was perfectly optional, of having a separate part of the specification primarily designed for delimitation. That is what we call the Claim.* (Emphasis added.)

**[97]** The purpose of the claims is to delimit the monopoly asserted by the inventor. In a celebrated passage in *Electric & Musical Industries Ltd & Boonton Research Corporation Limited v Lissen Ltd; Electric & Musical Industries Ltd and Boonton Research Corporation Ltd v G Kalis (trading as Andy's Radio Supplies) (Consolidated)* [1939] 56 RPC 23 at p 39, Lord Russell explained:

> *The function of the claims is to define clearly and with precision the monopoly claimed, so that others may know the exact boundaries of the area within which they will be trespassers. Their primary object is to limit, and not to extend, the monopoly*. What is not claimed is disclaimed. The claims must undoubtedly be read as part of the entire document, and not as a separate document. Nevertheless, the forbidden field must be found in the language of the claims, and not elsewhere. It is not permissible, in my opinion, by reference to some language used in the earlier part of the specification to change a claim which by its own language is a claim for one subject-matter into a claim for another and a different subject-matter, which is what

A you do when you alter the boundaries of the forbidden territory. *A patentee who describes an invention in the body of a specification obtains no monopoly unless it is claimed in the claims.* (Emphasis added.)

B **[98]** The starting point in patent litigation, whether to determine novelty, obviousness, or infringement, is thus to ascertain the scope of the claims in a patent. The point was well put by VK Rajah JA in *First Currency Choice* at para [22]:

C ... one of the most significant issues in patent litigation is the determination of the true construction of a patent specification, and, in particular, its claims. This is because the monopoly and scope of protection granted by a patent is defined by its claims (see *Electric & Musical Industries Ld v Lissen Ld* (1938) 56 RPC 23 ('Lissen') at p 39, which was followed in *Bean Innovations Pte Ltd v Flexon (Pte) Ltd* [2001] 3 SLR 121 ('Bean Innovations')). *Once the scope of the claims has been ascertained, the questions of whether the claims are obvious, whether a piece of prior art anticipated the claims and whether there has been an infringement of the patent can then be answered in concrete terms.* (Emphasis added.)

D

*Identifying the inventive concept*

E

**[99]** It follows that the inventive concept of a patent must necessarily be identified by reference to its claims. Referring to the *Windsurfing* test on inventiveness, Laddie J rightly observed in *Brugger and others v Medic-Aid Ltd* [1996] RPC 635 at p 637:

F *Windsurfing* was only putting forward a convenient way of approaching the statutory question; 'is anything falling within the scope of the claims obvious?'.

**[100]** It is the inventive concept that the patentee has put forward as G underpinning his monopoly that must be identified (at p 636):

The important issue as far as this case is concerned is to *identify correctly the inventive concept which the patentee must be taken to have put forward as underpinning his monopoly*. For this purpose it is necessary to bear in mind that the relevant inventive step must apply to all embodiments falling within the claims which are said to have H independent validity. It is not legitimate to define the inventive step as something narrower than the scope of the relevant claims. In particular it is not legitimate to identify a narrow sub-group of embodiments falling within the claim and which have certain technical advantages and then to define the inventive step in terms which apply to that sub-group but not the rest of the claim. (Emphasis added.)

I

**[101]** It is well-established that the inventive concept is to be distilled from the claims, not generally from the patent specification as a whole. As was held in *Unilever Plc v Chefaro Proprietaries Ltd* [1994] RPC 567 at p 580 (quoted in *Pozzoli* at para [17]):

So when the Act says, in section 3:

> An invention shall be taken to involve an inventive step if it is not obvious to a person skilled in the art, having regard to any matter which forms part of the state of the art ...

it means that which is in the claim under consideration. *It is the 'inventive concept' of the claim in question which must be considered, not some generalised concept to be derived from the specification as a whole.* (Emphasis added.)

**[102]** The same point was succinctly made by the House of Lords in *Conor Medsystems Incorporated v Angiotech Pharmaceuticals Incorporated and others* [2008] UKHL 49 at para [19]:

> ... the invention is the product specified in a claim and the patentee is entitled to have the question of obviousness determined by reference to his claim and not to some vague paraphrase based upon the extent of his disclosure in the description.

**[103]** The contention that the inventive concept need not be a part of the claims is based on a fundamental misconception of the rationale of patent law and the inventive step requirement. The scope of the monopoly granted by a patent is defined by its claims. In assessing inventiveness, what is ultimately determined is 'whether the patent has disclosed something sufficiently inventive to deserve the grant of a monopoly', in accordance with the policy of rewarding inventors without stifling innovation (*Société Technique*). The inventive concept is taken to be put forward by the patentee as *underpinning* the monopoly (*Brugger*). It would lead to an absurd result if an inventor is rewarded with a monopoly for an inventive concept which is not part of that monopoly.

**[104]** Thus we reiterate the position expressed by this court in *SKB Shutters* (at para [34]) that in the determination of novelty and inventive step alike, it is the claims that must be considered:

> We are of the view *the law is clear that when it has to determine if an invention which is the subject of a patent claim lacks novelty or inventive step, one looks at the language of the claims which define the scope and monopoly claimed* (see the case of *Electric and Musical Industries Ltd & Ors v Lissen Ltd & Anor* (1939) 56 RPC 23). The reference in *The General Tire & Rubber Co v The Firestone Tyre & Rubber Co Ltd & Ors* to a device is still in the context of a device as disclosed by the claims. It is ultimately the claims which must be looked at and considered. (Emphasis added.)

*Meaning of inventive concept*

**[105]** Under s 26 of the Patents Act 1983, each patent application may contain only one inventive concept:

> An application shall relate to one invention only or to a group of inventions so linked as to form a single general inventive concept.

**[106]** While the inventive concept of an invention must be derived from the claims, it is not to be equated with everything stated in the claims. As elaborated in *Unilever* at p 580 (quoted in *Pozzoli* at para [17]):

> The first stage of identification of the concept is likely to be a question of construction: what does the claim mean? It might be thought that there is no second stage — the concept is what the claim covers and that is that. But that is too wooden and not what courts applying *Windsurfing* stage one, have done. *It is too wooden because if one merely construes the claim one does not distinguish between portions which matter and portions which, although limitations on the ambit of the claim, do not. One is trying to identify the essence of the claim in this exercise.* (Emphasis added.)

**[107]** The inventive concept is the 'essence of the idea' that is important in a patent (*Molnlycke* at p 122), the 'skilled man's take-home message from the claim' (*Pozzoli* at para [49]). The House of Lords explained the meaning of inventive concept in *Generics (UK)* at para [30]:

> 'Inventive concept' is concerned with the identification of the core (or kernel, or essence) of the invention — the idea or principle, of more or less general application (see *Kirin-Amgen* [2005] RPC 169 paras 112–113) which entitles the inventor's achievement to be called inventive.

**[108]** Technical advantages of an invention which the patentee aimed to achieve, but are not included in the scope of the claims, do not constitute an inventive concept (*Brugger* at pp 656–657):

> The achievement of any particular performance plays no part in the definition of the scope of the claims or the inventive concept. *The fact that the patentee was aiming to achieve certain functional advantages when designing his new nebuliser may well explain how he arrived at his preferred embodiments but what the court is concerned with is not the inventive concept, if any, in the preferred embodiments but the inventive concept put forward in the claims* ... As the defendant put it, the plaintiffs were free to try and formulate a claim limited by function or airflow or result, but did not do so. (Emphasis added.)

**[109]** It has been suggested that a 'problem and solution' approach be adopted when identifying an inventive concept. This suggestion stemmed from Lord Hoffmann's statement in *Biogen Inc v Medeva Plc* [1997] RPC 1 at p 45:

> A proper statement of the inventive concept needs to include some express or implied reference to the problem which it required invention to overcome.

**[110]** We note that this approach has been expressly rejected by the High Court of Australia in *Lockwood* (at pp 62–65). The court referred to the above

formulation in *Biogen* and explained its difficulties as follows:

> Such developments were considered and distinguished in *Alphapharm*. This court rejected confining the question of obviousness to a 'problem and solution' approach, particularly with a combination patent. This should not be misconstrued. The *'problem and solution' approach may overcome the difficulties of an ex post facto analysis of an invention, which may be unhelpful in resolving the question of obviousness. However, it is worth repeating that the 'problem and solution' approach may be particularly unfair to an inventor of a combination, or to an inventor of a simple solution, especially as a small amount of ingenuity can sustain a patent in Australia*. Ingenuity may lie in an idea for overcoming a practical difficulty in circumstances where a difficulty with a product consisting of a known set of integers is common general knowledge. This is a narrow but critical point if, as here, the circumstances are that no skilled person in the art called to give evidence had thought of a general idea or general method of solving a known difficulty with respect to a known product, as at the priority date. (Emphasis added.)

**[111]** Under the Malaysian Patents Act 1983, the reference to a problem and solution is a separate requirement for a patentable invention under s 12 of the Act, which defines an invention as an idea 'which permits in practice the solution to a specific problem in the field of technology'. In the circumstances we do not consider that the 'problem and solution' approach needs to be adopted in identifying the inventive concept in a patent, for to do so would conflate the two distinct statutory requirements of 'invention' and 'inventive step'.

**[112]** There is no rigid rule to state at what level of abstraction, or how broadly or narrowly, the inventive concept of an invention is to be identified. Nevertheless, the courts are guided by the general principles outlined above in ascertaining the inventive concept from the claims (*Mühlbauer* at para [43]):

> It is not something which can be reduced to a mechanistic formula simply because life in general and the decisions of courts (as a consequence) in particular are too complex to admit of a rigid formulaic approach. However, that does not mean that there are no general principles that ought to guide the court ... In the specific sphere of patent law, we would think that, in addition to the general legal rules and principles (embodied in ss 13, 14 and 15 of the Act; see also generally above), the court would also need to apply those rules and principles (as well as those relating to general logic and argumentation) to the specific claims which are contained within the patent(s) concerned. *Indeed, these claims constitute the specific factual matrix as well as context which the court takes into account in arriving at its decision.* (Emphasis added.)

*Our decision on questions 2 and 3*

**[113]** Based on the discussion above, we answer question 2 as follows: in determining both the scope of the claims for assessing novelty and the inventive

A concept for assessing inventiveness, the court must look at the claims in the patent. However, the inventive concept is not one and the same as the claims; it is the core or essence of the invention.

B **[114]** We answer question 3 in the negative. The inventive concept of an invention is to be assessed by reference to the claims. It cannot be a vague or generalised concept excluded from the claims but derived from the specification as a whole.

C APPLICATION TO THE PRESENT APPEAL

**[115]** We now apply the principles explained in relation to the questions of law above to the facts of the present appeal.

D **[116]** Counsel for the appellant submitted that MY-567 discloses three inventive concepts, namely the reparability feature, the fluid tight feature, and the installation method. The appellant relied on the opinion of PW1 that the three features are absent or different from the prior art, and are not obvious to a person skilled in the art. It was contended that:

E (a) the reparability advantage is derived from the inter-working of the three portions, allowing the second portion to be removed and replaced in the event of damage. In contrast, USP 210 was not designed with the need for repairs, and the whole floor trap would have to be replaced;

F (b) the concentric S-flow water seal is achieved by the insertion of the second portion of the trap into the first portion in a fluid tight manner. The liquid collected in the trap forms a water seal which prevents the backflow of odorous gases and pests. In contrast, the floor trap disclosed in USP 210 does not ensure that liquid is strictly in an S-flow and allows the backflow of gases; and

G (c) the installation method taught in claim 10 ensures that the floor trap would always be installed on a horizontal level to the floor slab. While USP 210 does not specify an installation method, the reference therein to adjustment means suggests that the trap may not always be installed in a strictly level manner.

H

I **[117]** The appellant argued that taking into account USP 210 and the common general knowledge at the priority date, significant research and development would be required to come up with the SPIND Floor Gully/Trap. On the evidence, it was contended that the learned trial judge erred in relying substantially on the opinion of DW3, who admitted that he is not a person skilled in the art, and preferring his opinion over PW1 and PW3, who are properly qualified experts in the field. In addition, it was argued that the

learned trial judge failed to take into account the commercial success of the SPIND Floor Gully/Trap as secondary evidence of its inventiveness.

**[118]** Counsel for the respondents submitted that the reparability feature was anticipated by USP 210. It was argued that the reparability feature derived from the inter-working of three distinct components, the second of which is replaceable; counsel contended that the three-component feature was already present in USP 210, as agreed by PW1 and PW3. It was also argued that the appellant's own evidence, given through PW3, was that the reparability feature, being not clearly stated in MY-567, is disclaimed.

**[119]** On the issue of expert evidence, the respondents' counsel submitted that, as noted by the Court of Appeal, the High Court did not accept the evidence of DW3 wholesale but also considered the evidence of PW1 and PW3. Counsel argued that the appellant has failed to demonstrate any miscarriage of justice as a result of preferring the evidence of DW3 to justify interference with the concurrent findings of the courts below. In any event, it was contended that the impugned patent was liable to be invalidated regardless of the evidence of DW3.

*Construction of claims*

**[120]** The starting point for the assessment of novelty and inventiveness is to construe the scope of the claims. Claim 1 in MY-567 describes the alleged patented invention as follows:

> A concentric 'S'-type floor trap characterised in that it includes a first portion comprising a first pipe section (1) which is open at both ends, a second portion comprising an annular portion (5) of external diameter substantially equal to the internal diameter of the first pipe section (1) and which carries on one face a second pipe section (6) which is open at both ends and on the other face at least one third pipe section (10) which is at least partially open at both ends, said second and third pipe section (6, 10) enclosing but not necessarily being co-extensive with the central aperture (7) of the annular portion, said annular portion being capable of being inserted into said first pipe section (1) and fixed therein in fluid tight manner, and a third portion cooperating with said first and second portions to prevent liquid entering the trap from passing directly through said second pipe section (6) and comprising a cover member (13) and a fourth pipe member (known as a skirt) (12), whereby in use the first portion can be mounted in the floor, the second portion be fixed inside said first option with its second pipe section (6) uppermost and the third portion be positioned so that its cover member (13) covers but is spaced from the open upper end of the second pipe section (6) and the skirt (12) extends downwardly below said upper end to define an 'S' shaped flow channel through the trap.

**[121]** Claim 10 of MY-567 states:

A method of fixing a floor trap as claimed in claim 1 which comprises fixing the first portion formwork, pouring concrete to form a floor in which the first portion is set, fixing the second portion in the first portion in water tight manner and inserting the third portion within said first portion.

**[122]** A section in the description entitled 'Background of the Invention' includes the following statement:

> Traps of this type sometimes become broken during installation or during use and when this happens the entire trap has to be removed from the floor in which it is located and replaced. This can be a very time-consuming and arduous exercise, and, accordingly, it would be an advantage to provide a trap of this type which could be repaired rather than replaced.

**[123]** A purposive construction is to be adopted to give effect to what the person skilled in the art would have understood the patentee to be claiming (*Catnic Components Ltd and Another v Hill and Smith Ltd* [1982] RPC 183 at pp 235–236). The threshold question is: what would the person skilled in the art have understood the patentee to be using the language of the claim to mean? As eloquently explained by Lord Hoffmann in *Kirin-Amgen Inc and others v Hoechst Marion Roussel Ltd and others; Hoechst Marion Roussel Ltd and others v Kirin-Amgen and others* [2005] 1 All ER 667; [2004] UKHL 46 at para [34]:

> *'Purposive construction' does not mean that one is extending or going beyond the definition of the technical matter for which the patentee seeks protection in the claims. The question is always what the person skilled in the art would have understood the patentee to be using the language of the claim to mean. And for this purpose, the language he has chosen is usually of critical importance.* The conventions of word meaning and syntax enable us to express our meanings with great accuracy and subtlety and the skilled man will ordinarily assume that the patentee has chosen his language accordingly. As a number of judges have pointed out, the specification is a unilateral document in words of the patentee's own choosing. Furthermore, the words will usually have been chosen upon skilled advice. The specification is not a document inter rusticos for which broad allowances must be made ... There will be occasions upon which it will be obvious to the skilled man that the patentee must in some respect have departed from conventional use of language or included in his description of the invention some element which he did not mean to be essential. But one would not expect that to happen very often. (Emphasis added.)

**[124]** Thus the language used by the patentee is more often than not of utmost importance (*First Currency Choice* at para [27]). While the claim may be construed in the context of the specification as a whole, it is not permissible to alter the scope of the claims beyond its language by reference to the language used in the earlier part of the specification (*Electric & Musical Industries* at p 39).

**[125]** Applying the principles of purposive construction, we note that the

reparability feature is not expressly stated nor alluded to in the language of claim 1. It is a technical advantage derived from the inter-working of the separate portions in a three-part design, a design which has been disclosed in USP 210. The monopoly claimed by MY-567 cannot be broadened to include the reparability feature by reference to the background section of the specifications. Hence, it was rightly conceded by the appellant and concluded by the learned trial judge that the reparability feature does not fall within the scope of the claims in MY-567.

**[126]** Since the reparability feature is not claimed, it ought not to be taken into account in the assessment of either novelty or inventiveness. The fact that the reparability feature is disclaimed does not itself destroy the novelty of MY-567. However, as alluded to above, the appellant was not granted leave to challenge the finding that the fluid tight feature is not novel or to raise other purported novel features at this stage. In the circumstances, the finding of the courts below that MY-567 is not novel still stands.

*Whether MY-567 involves an inventive step*

**[127]** Given the concurrent findings of the courts below that MY-567 is not novel, the question of whether it involves an inventive step does not arise (*Genelabs Diagnostics* at para [51]). Nevertheless, for the purposes of the present discussion, we will proceed to apply the *Windsurfing* test to the facts on the assumption (without deciding) that the invention disclosed in MY-567 is novel.

**[128]** Step 1 requires the identification of the inventive concept, which is the core or essence of the claim underpinning the monopoly asserted by the patentee. It is recalled that pursuant to s 26 of the Patents Act 1983, each patent may only contain a single general inventive concept. With reference to claim 1 of MY-567 and the essential features thereof identified by the learned trial judge, we consider that the inventive concept may be formulated as thus: 'a floor trap embedded in the floor slab comprising of three parts, which enables liquid to flow in a concentric S-flow manner and a built-in water seal to be formed'.

**[129]** The reparability feature constitutes a technical advantage which the patentee aimed to achieve but was not included in the claims. Following *Brugger* (at pp 656–657), such technical advantages cannot be part of the inventive concept in MY-567.

**[130]** In identifying the essence of the claim, there is a need to 'distinguish between portions which matter and portions which, although limitations on the ambit of the claim, do not' (*Unilever* at p 580). In this regard we find the

following observation by Lord Diplock on purposive construction, albeit in the context of infringement, helpful (*Catnic* at pp 236–237):

> The question in each case is: whether persons with practical knowledge and experience of the kind of work in which the invention was intended to be used, would understand that *strict compliance with a particular descriptive word or phrase appearing in a claim was intended by the patentee to be an essential requirement of the invention so that any variant would fall outside the monopoly claimed, even though it could have no material effect upon the way the invention worked* … No plausible reason has been advanced why any rational patentee should want to place so narrow a limitation on his invention. On the contrary, to do so would render his monopoly for practical purposes worthless, since any imitator could avoid it and take all the benefit of the invention by the simple expedient of positioning the back plate a degree or two from the exact vertical. (Emphasis added.)

**[131]** It is difficult to conceive the installation method described in claim 10 as an essential requirement or the core of the invention which underlies the monopoly claimed. As such, we do not consider the installation method to be part of the inventive concept of MY-567.

**[132]** At step 2, the court is to don the mantle of a person having ordinary skill in the industry of designing or installing floor traps.

**[133]** At step 3, the difference between the prior art USP 210 and MY-567 is the formation of a water seal by way of the fluid tight seal between the inner and outer portions of the floor trap.

**[134]** Step 4 requires the court to consider whether, viewed without the knowledge of the alleged invention in MY-567, the difference would be obvious to a person having ordinary skill in the art in view of USP 210. We note that USP 210 states as follows in respect of the seal between the inner and outer portions of the floor trap:

> Also abutting slope 12 is formed inside of outer housing 11 which in turn carries cover plate 10 having openings 9 at its top portion, and outer cylinder 2 is fitted within outer housing 11 so that abutting slopes 5 and 12 may *tightly abut together*. (Emphasis added.)

**[135]** In holding that the fluid tight feature was anticipated by USP 210, the High Court and the Court of Appeal have interpreted the underlined words to mean that the point of contact was intended to be fluid tight. Even if (without deciding) such an interpretation were erroneous, we consider that it would have been an obvious step to a person having ordinary skill in the industry of floor traps to try to affix the abutting slopes in USP 210 in a fluid tight manner. It does not require a 'scintilla of invention' to make a workshop improvement to the point of contact between the 'tightly abut' inner and outer portions in

USP 210 so as to render it fluid tight. Bearing in mind the rationale for the inventive step requirement, the public should not be prevented by a monopoly from adopting an obvious modification to the existing product disclosed in USP 210.

**[136]** The appellant's counsel challenged the evidence of DW3 on two grounds, namely his lack of independence as a party to the suit, and his admission that he is not a person skilled in the art. The first ground does not in itself render DW3's evidence inadmissible, and the acceptance of DW3's evidence does not mean that the learned trial judge failed to accord proper weight to the evidence of an interested party. A similar argument was raised in *Mühlbauer*, where the witness concerned was one of the actual inventors of the subject-matter of the case. The argument was rejected by the Singapore Court of Appeal (at para [47]):

> ... there is insufficient evidence on the record to demonstrate that the judge did not discount the views of Mr Briar accordingly. *The mere acceptance (even in its entirety) of such views does not necessarily entail the absence of such a discount* ... the views by the experts appointed by both parties were not, in our view, critical, except in so far as they enabled this court to understand what were the precise claims in the respective patents. To this end, both the experts' views were helpful, bearing in mind that it is, in the final analysis, the court which decides whether or not the requisite legal criteria have (or have not) been satisfied. (Emphasis added.)

**[137]** In respect of the second ground, s 45 of the Evidence Act 1950 defines an expert as follows:

> 45 Opinions of experts
>
> (1) When the court has to form an opinion upon a point of foreign law or of science or art, or as to identity or genuineness of handwriting or finger impressions, *the opinions upon that point of persons specially skilled in that foreign law, science or art*, or in questions as to identity or genuineness of handwriting or finger impressions, are relevant facts.
>
> (2) Such persons are called experts. (Emphasis added.)

**[138]** The notes of proceedings show that DW3 made an unequivocal admission in cross-examination by the appellant's counsel that he is not a person skilled in the art:

> Q: Now, in this case I put it to you that you are not a person skill *[sic]* in the relevant art ie the construction and making of floor gully trap, agree?
>
> A: Agree.

**[139]** DW3 further admitted that he had no hands-on or practical experience in the design, handling and installation of plumbing and sanitary systems. Given the admissions, DW3 cannot be considered as an expert as defined by statute, and accordingly his personal opinion on the inventiveness or otherwise of MY-567 is not admissible.

**[140]** However, it is not apparent from the grounds of judgment that the learned judge had relied substantially, if at all, on DW3's opinion in reaching a decision on the issue of inventiveness. It is worth reiterating that the role of the expert witnesses is primarily to assist the court in the technology; it is for the court itself to don the mantle of the skilled person and determine the question of inventiveness (*SKB Shutters* at para [58]). In the circumstances, the appellant has failed to show that the inadmissibility of DW3's opinion invalidates the learned trial judge's finding on inventiveness.

**[141]** Secondary evidence of commercial success is not in itself conclusive of inventiveness. The appellant has not adduced evidence to establish that the commercial success of the SPIND Floor Gully/Trap is attributable to a 'long-felt need in the industry' and credited to the invention itself, rather than to other factors (*Mühlbauer* at para [107]). As such, the evidence of commercial success does not assist the appellant's case.

**[142]** It is appropriate at this juncture to emphasise Lord Hoffmann's cautionary words against appellate interference with the trial judge's finding of fact on the question of obviousness (*Biogen* at p 45):

> The need for appellate caution in reversing the judge's evaluation of the facts is based upon much more solid grounds than professional courtesy. It is because specific findings of fact, even by the most meticulous judge, are inherently an incomplete statement of the impression which was made upon him by the primary evidence. His expressed findings are always surrounded by a penumbra of imprecision as to emphasis, relative weight, minor qualification and nuance (as Renan said, la verite est dans une nuance), of which time and language do not permit exact expression, but which may play an important part in the judge's overall evaluation ... *Where the application of a legal standard such as negligence or obviousness involves no question of principle but is simply a matter of degree, an appellate court should be very cautious in differing from the judge's evaluation.* (Emphasis added.)

**[143]** For these reasons, even if the invention in MY-567 is novel, we find that it does not involve an inventive step as required in s 15 of the Patents Act 1983. While the High Court and the Court of Appeal have not applied the *Windsurfing* test in a structured manner, having applied the test we nevertheless see no reason to depart from the conclusion reached by the courts below on inventiveness.

CONCLUSION

**[144]** In view of the foregoing, we hold that the MY-567 patent is invalid. Accordingly, we affirm the decision of the High Court and the Court of Appeal to dismiss the appellant's claim and allow the respondents' counterclaim. In this regard we would like to quote S Thorley, R Miller, G Burkill, C Birss, Terrell on the *Law of Patents* (15th Ed, London: Sweet & Maxwell, 2000) at p 199 which states:

> It has been said that there cannot in any event be an infringement of an invalid patent. Thus Jacob J said in *Organon Teknika v Hoffman-La Roche* [1996] FSR 383 R 386: 'In English law validity and infringement are part of the same questions. You cannot infringe an invalid claim, even if you fall within its language'.

**[145]** The abovesaid proposition of law was adopted by the Court of Appeal and subsequently affirmed by this court in *SKB Shutters*.

**[146]** The validity of the disputed patent application filed by the first respondent did not arise in the present appeal. Thus, we would grant all the reliefs prayed for by the respondents in their counterclaim with the exception of prayer (9), which is:

> An injunction to restrain the [Appellant] and each of them whether acting by themselves, their directors, officers, employees, servants or agents or any of them or otherwise howsoever from doing the following acts or things or any of them, that is to say, instigating, instituting or initiating or threatening to institute or initiate civil or criminal action in respect of the 1st [Respondent's] floor gully traps.

**[147]** The appeal is dismissed with costs.

*Appeal dismissed with costs.*

Reported by Afiq Mohamad Noor